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ETHICS AND BIOLOGY.

I.

BIOLOGY is the science of the vital properties of organic beings. Ethics is the science of the right conduct of rational beings. Or, let us rather say, it is the attempted formulation of what constitutes right conduct for thinking, social beings, whereby they become truly rational.

Now the question is, whether in this attempted determination of what constitutes right conduct for us human beings, biological science can be of any effective help to us? We wish to ascertain whether our tentative codes of ethics can find in biological facts positive confirmation, or positive negation;—above all, whether our leading ethical intuitions are anyway grounded in biological relations?

The answer we feel forthwith prompted to give to these weighty questions will be chiefly governed by the view we are wont to take of the relation of man's rational being to his vital organization. And it is only on a correct interpretation of this perplexing relation that ethics can be scientifically grounded.

Empirical ethics—consciously or unconsciously dominated by the humanitarian or social stand-point—can make pretty good practical headway by building upon some humanistic foundation, such as pleasure, utility, justice, sympathy, benevolence, individual well-being, self-perfection, or social welfare. But such empirical ethics lacks the scientific and philosophical standing-ground, through which alone its essential principles can derive their final justification.

It is evident that such views of the relation of our rational being to our vital organization, as regard this body of ours as a mere hinderance to ethical aspiration, or as a mere passive instrument wielded by a spiritual agent, or as a mere illusion of unrationalized sense; that such ascetical, dualistic, or idealistic views cannot consistently appeal to biology for ethical enlightenment. Under their sway ethical determination must

be held to emanate exclusively from an invisible principle in some way inhabiting and actuating our visible organism, in which case the latter could play no other than an ethically obstructive or indifferent part.*

On the other hand, it is just as evident, that, neither the mechanical view of organization and vital activity,† nor the view which takes the human body and its functions to result from the pre-concerted co-operation of innumerable elementary and autonomous lives,‡ nor any kind of primordially pre-established evolution; that none of these fatalistic views leaves any allotment of free power in us for ethical self-determination.§

Theories of human nature, involving whatever kind of original predestination and pre-ordination, inevitably exclude ethical self-determination. All theological, philosophical or scientific reasoning to the contrary, however ingenious, is clearly made up of mere sophistical subterfuges. It is incontestable

* The view my studies have led me to form regarding the perplexing relation of body and mind I have sought on numerous occasions to explain. I will here only refer to "The Scientific Basis of Religious Intuition." Address written for the Free Religious Association. *The Index*, 1886, p. 570. "Mental Activity." *Mind*, Vol. XIV, No. 56. "Psychical Monism." *The Monist*, Vol. II., No. 3.

† See "Fatalistic Science and Human Self-determination," *The New Ideal*, 1889-90, and "Automatism and Spontaneity," *The Monist*, Vol. IV., No. 1.

‡ See "The Dependence of Quality on Specific Energies," *Mind*, Vol. V., p. 1. Also "Are we Cell-Aggregates?" *Mind*, Vol. VII., p. 100.

§ Leibnitz, as a consistent outcome of his "Monadologie," in which he sought to unify and systematize the three fatalistic views above mentioned,—the mechanical view, the building up of the organism by autonomous monads, and primordially pre-established evolution,—was forced to adopt an out-and-out necessitarian conception of human nature. "Tout est donc certain et déterminé par avance dans l'homme comme partout ailleurs, et l'âme humaine est une espèce d'automate spirituel." (Théodicée.)

Kant, who was likewise an out-and-out determinist in the physical as well as in the mental sphere, shows to what far-fetched shifts a consistent thinker has to have recourse in order to reconcile determinism in nature with ethical conduct. He was forced to advance the obviously self-contradictory assertion that actions are free or ethical only when determined by our intelligible, noumenal, supernatural self. And that these same actions, when they come to appear in the sensible world of time and space, are found, nevertheless, to be forming part of the "mechanism of nature."

that the possibility of ethical conduct is altogether dependent on some degree of free self-determination, on some amount of free volitional control, not only over our ideas, but also over our motor or executive apparatus.

II.

Refusing to be persuaded of our ethical impotency by theological, philosophical, or biological theories of predestination, let us now turn our attention to biological conceptions which involve, as such, important ethical implications, and which, in fact, have exerted considerable influence on the ethical views of our time.

Foremost among these is the conception introduced into biology by Bichat,* and recently brought under Darwinian influence to its legitimate conclusions by George Heinrich Schneider.

Descartes had bisected human nature into two totally disparate constituents: a thinking substance and an extended substance; the former manifesting our conscious life, the latter our bodily activities. It soon became evident to himself and others, that two such incommensurable substances were incapable of entering into natural intercommunication; that their apparent interaction can therefore be only supernaturally effected. Modern philosophy is still laboring to extricate itself from this Cartesian dilemma; as yet with very doubtful results. Of course, in keeping with such an ultra-dualistic arrangement no biological knowledge of the substance of our body could possibly be of any ethical use to the thinking substance.

Bichat likewise bisected human nature, but from the standpoint of the anatomist and physiologist. He held the human body to consist of two radically distinguished sets of organs, each having its different kind of life. The internal organs,

* As proof of the philosophical and ethical importance of Bichat's biological views, I will here quote what Schopenhauer says: "Bichat's observations and my own corroborate each other; his are the physiological commentary to mine, and mine the philosophical commentary to his. Both are best understood when read together." "Die Welt als Will," Vol. II., B. 2, Chap. xx.

heart, stomach, liver, sexual organs, and the rest, constitute what he calls the organic life, and are, according to him, the seat of the passions or appetitive cravings. The external organs, chiefly brain, sensory organs, and voluntary muscles, he distinguishes as the animal life, or the life of outside relations.

Now the central and essential conception underlying Bichat's interpretation of human nature, and of animal nature in general, consists in regarding the life of outside relations as entirely subservient to the organic life, as existing solely to minister to the cravings and desires of what he calls the passions. The organs designated by biology as those of the ectoderm, chiefly brain, sensory organs, and voluntary muscles, would thus be mere instruments elaborated for the purpose of satisfying entodermic or appetitive needs. These appetitive needs, in their turn, subserving one single end,—the preservation of the life of the individual and its kind.

The elementary passions, such as hunger, the fear of danger, sexual desire, parental affection, the fighting rage; all are found to conduce to the attainment of one and the same end: preservation of self, and propagation of the kind.

As to the life of outside relations, its movements of whatever sort are in their turn subservient to the life-preserving passions. The pursuit and prehension of prey, the flight and hiding from enemies, the seeking and wooing of mates, the tending of offspring, the offensive and defensive use of natural weapons; all these activities are exercised to accomplish what the passions are craving for; all resulting in the perpetuation of life.

Moreover, under this aspect, mental or conscious awareness, in its increasingly complex efficiency, is developed solely for more and more subtle guidance in the execution of the movements that minister to the life-preserving passions. In the beginning, lowest in the scale of development, awareness only on immediate contact through the sense of touch; then awareness at a distance through other sensory channels; then awareness of remembered occasions through

mental representation ; at last, awareness of possible occasions through thought.

The entire life of outside relations, all the organs and conscious abilities, by means of which we enter into intercommunication with the external world, seem thus to be simply implements used in the service of the organic passions ; these passions being themselves only the expression of the life-craving, life-perpetuating instinct.

It must be confessed, that, contemplating animal existence in general, this interpretation of life with its alleged supremacy of entodermic organs appears hardly exaggerated. The appetitive impulsions of hunger and sexual desire seem, indeed, to constitute the motive spring of animal exertions.

This apparent state of things being accepted as philosophically correct, the eminently serious ethical question arises, whether life of this description is at all worth preserving and propagating ?

No doubt, if the gratification of hunger and lust constitutes really the chief concern of existence, if our body is merely a machine cunningly contrived for the better glutting of appetites, and if it all means in essence nothing but perpetuation of such utterly sensual aims ; then our present life has to be looked upon as something ethically undesirable, as something abhorrent to our ethical reason and its aspirations.

When we consider that such ethical abhorrence, and consequent abnegation of our present life forms the core, the emotive mainspring of the religions professed by the highest cultured nations, oriental and occidental, it must be conceded that, what I may biologically call the entodermic interpretation of life, has played, and is still playing, a momentous part in the guidance of our moral conduct.

And here it is interesting to notice how successfully this entodermic interpretation, which has dominated ascetic ethics, and which lies so near to whoever contemplates life as driven by its elementary instincts, has been recently elaborated by the eccentric yet eminently gifted recluse, Arthur Schopenhauer.

The actuating power beyond the illusory world of sense, the undying "Will," presses in its craving for life with blind and fanatic zeal into the realm of sensual gratification, lured thereby from disappointment to disappointment, and from misery to misery. The intellect, no less than all bodily organs, are but tools adapted with increasing aptitude to satisfy more and more completely this frantic craving for life. In some rare instances of abnormal development, however, the intellect emancipates itself from its abject slaving in furtherance of the life-craving propensities of deluded Will. It then recognizes the utter futility, essential painfulness, and fundamental wickedness of life as such. And henceforth its total abnegation becomes the rationally prescribed ethical end. This, surely, is hedonic ethics with a vengeance.

We have now to dwell a few moments on another biological conception which has lately influenced ethical opinions. It has been pretty generally accepted that the beings now existing on our planet are those whose kind has survived all foregone vicissitudes, as the most fit to live in interaction with its present medium. And it has been ascertained that selection of the progressively fittest and weeding out of the less fit has been brought about by the merciless struggle for existence actually witnessed as still operative among living creatures.

The recognition of this undeniable state of things has introduced new puzzles for ethical solution, or rather old puzzles under a new guise. Here we have a system of mutual encroachment and carnage that from our ethical stand-point must be pronounced extremely abhorrent. Yet it has led to results that even by pessimism have to be regarded as desirable. For among the host of creatures upon, above, and under the earth, and in its waters,—creatures incessantly struggling to devour one another, or to escape being devoured,—the one being possessing the redeeming ethical consciousness has at last been developed under the sway of these very same ethically abhorrent means.

Now the question arises whether—looking back with our established moral consciousness upon the unethical means that have been instrumental in the development of organic

life—the ethical consciousness has itself been one of the unethically developed results? Or whether consciousness in its ethical character and bearings has, on the contrary, been developed by means essentially different from those that have been instrumental in the development of animal life in general?

In trying to answer this question, we encounter difficulties still more perplexing. For, though it is clear that the fittest for their present mode of life have managed to survive by all sorts of means, which from our point of view we must deem eminently unethical, is it not possible that the creative initiation of progressively higher qualities, exposed to the struggle for existence and offered thereby for natural selection, has been from the beginning aimfully preconcerted, so as to evolve at last the moral consciousness?

Or, as an alternative, may it not be that interaction of the organism with the multifold influences of the medium has constituted the veritable means by which the organism has been progressively developed? May it not be that the functional play with external influences has led to the organic development of more and more subtly differentiated and elaborated means of interaction; that, then, the varying peculiarities in the disposition of these organic means—resulting in differentiation and specification of living forms—may have been selected as the fittest to carry on life amid the peculiarities of a specific medium; and that, consequently, interaction with the peculiar medium, in which we human beings have come to live, has given rise to our moral consciousness?

Under the first supposition, that of aimfully preconcerted evolution leading as its culmination to moral development, it is clear that ethical purpose and ethical responsibility have to be attributed to the power believed to have ordained such evolution. And, as it cannot be rightly deemed presumptuous on our part to use our ethically-developed judgment—valid for all rational beings in reference to their actions—we would then be certainly ethically justified in condemning as exorbitantly wasteful and outrageously ruthless the means employed to achieve the intended ethical result.

Theological sophisms, however consummately twisted, are ineffective, under this supposition, to ethically exculpate an agent assumed to be unhampered in his creative power. If, on the other hand, the theory of creative all-efficiency be disputed, as creation evidently proceeds as a solidary evolutionary process, it is illegitimate to conjecture with John Mill and others, and long before them with the divine Plato, that the creating agent is ethically well-intentioned, but thwarted by adverse conditions; such, for instance, as the obstinate resistance and aimless motion of an originally formless world-material; or, contrariwise, by the malignant propensities and tricks of an all too specifically formed and aimfully moving Devil.

Under the second supposition,—that of organic beings developed by dint of their own functional exertions in interaction with the agencies of their medium,—nothing that can rightly be called ethical can be discovered in our world before the moral consciousness of man actually comes into being, inaugurating through its guidance a higher mode of existence,—namely, that of obedience to the dictates of comprehensively unified reason, with corresponding adjustment of the aims of volition, and suitable transformation of that part of the medium over which we may gain volitional control.

Should our ethical consciousness really turn out to be thus a gradually-developed outcome of the interaction of our organism with the outside world, no alarm need be taken by those in search of inscrutable profundities, whence the manifest phenomena of our world emerge into existence. Our intellect, however deeply it may probe the present order of things, fails to reach the ultimate spring of creation. The issuing of worlds into being with all their developmental potentialities remains to us wholly enigmatical. We stand baffled before the beginning and end of creative activity, before the antinomies of time and space, and the forces that fill these seeming emptinesses with their wealth of ever-becoming things.

But, so far as ethical reason is concerned, it is surely groundless theological cosmology that can pretend to detect any trace of it in the boundless reach of condensing nebulae and whirling

worlds, which constitutes the sense-revealed universe. Ethical reason emerges as such solely in and through the social relations of man to man. Rational self-consciousness, which is the veritable matrix of all that can be rightly called ethical, how can it be legitimately or even plausibly ascribed to blazing suns and cooling planets, or to such like cosmic stuff as the fiery, subtle ether of Heraclitus and the Stoics, antique prototype of the all-competent interstellar *deus ex machina* of our own physicists?

We earth inhabitants, at all events, have to regard ethical consciousness as the highest revealed outcome of evolution, not to be discovered pre-existing anywhere outside ourselves. This, of course, does not exclude the possibility, even the probability, that in other solar systems self-conscious beings have likewise been developed. If so, there too ethical reason can be only the outcome of gradual development.

The prevalent notion, so persistently adhered to, the notion that effects cannot transcend in the scale of being their underlying causes, or more correctly their co-operating conditions, is glaringly contradicted in all cosmical development, nay, in every chemical combination.

Neither does utmost idealistic rarefaction of the sense-apparent world suffice to endow it with anything that can be compared with our own intelligence and its moral consciousness. On the other hand, let us emphasize the evident fact that our modes of consciousness, whether those of sense or those of intellect, though they are world-revealing, are nowise world-creating.

III.

As explained in the former section, it is of decisive importance to our estimate of the ethical value of life, whether we are scientifically justified in regarding—in accordance with the spirit of ascetic religions, and with Bichat and Schopenhauer—the life of outside relations as developed solely to subserve self-gratifying passions? Or whether our appetitive cravings are, on the contrary, instrumental in supplying the life of outside relations with the means needful to carry on self-important and self-improving functions?

I deem it one of the most satisfactory results of many years devoted to the study of the vital activities of primitive forms of life to be able positively to assert and to prove that the fundamental and essential activity of life consists in the functional play of the organism with the medium at their surface of contact. The living substance is alive because of this functional play. Its vitality consists in alternate disintegration through clashing contact with surrounding influences, and reintegration by dint of the specific affinities inwoven in its chemical constitution. In consequence, we find that the highest organs of animal life are all developed in the surface layer. Brain, sensory organs, and voluntary muscles are all of ectodermic origin.

Nutriments is nothing but complemental material serving the purposes of reintegration. And however elaborately constituted nutritive organs get to be in the course of organic development, they have no other office than that of supplying appropriate complemental material for restitutive assimilation. The organs of the life of outside relations, instead of being mere tools for appetitive gratification, are themselves the essential embodiment of life. And the entodermic organs, so far as food appropriation is concerned, are simply a culinary department entrusted with the complex and delicate preparation of complemental material to be used in furtherance of the life of outside relations.

Consequently, hunger, which with its ravenous train of ruthless passions is playing so dominant a part in the drama of life, is really an appetitive sign expressive of a need for restitutive material on the part of the life of outside relations. However fierce and relentless its struggle for satisfaction, it is essentially an effort to save from deterioration the secured results, the precious fruits of progressive life, so laboriously and precariously matured during ages upon ages of never-flagging vital activity. The end and aim which hunger in all verity subserves is to maintain intact the high-wrought integrity of the living substance. And, as the living substance becomes through gradual elaboration the more and more highly constituted matrix of what we recognize as the inherited wealth and

worth of life, the gratification of hunger, far from being a self-sufficient appetitive craving, is really an indispensable means to the attainment of higher development. Biology furnishes thus the positive disproof of the hedonic end ascribed by many philosophers to this most urgent of appetitive cravings.

Sleep, another of our appetitive promptings, whose insistence is resistless and gratification balmy sweet, ministers likewise, beyond its own indulgence, in a supreme degree to organic restitution. It withdraws our being from the sense-obtruding world to those strange, unconscious depths, where nature's healing powers effect with silent toil the restoration, the buoyant rejuvenescence of life's strained faculties, used up in their day-long contest with the unrelaxing influx of the outside world. And more mysterious still, in that unconscious, sense-occluded state we call sleep are unified into a consistent mental structure the scattered fragments of waking experience. Here again biology positively shows, as in the case of hunger, that the pleasurable implications are mere means and not ends in themselves.

The appetite of sex, which along with that of hunger seems almost exclusively to sway the actions of animals, and whose gratification involves for us rational beings such grave ethical consequences, proves biologically to subserve ends, the consciousness of which is still less immediately given. And it is in proportion as we rationally come to appreciate more and more fully the import of these ends, that our conduct in regard to them assumes a progressively ethical character.

If the passions of hunger are instrumental, not only in the preservation of individual life, but also in its progressive development, all the more are the passions of sex instrumental, not only in the propagation of the race, but also in its future elevation in the scale of being. For manifold results point clearly to a unitary fusion of the sexual germs, and not merely to the mixing of their separate molecules, as Weismann teaches. With the same lavish waste that of million seeds "often brings but one to bear," or rather with the same profusion of means securing victory over multifold adverse chances, this unitary fusion of reproductive germs ministers

with endlessly precarious, yet triumphant progress to the heightening of organic wealth and worth.

Now, while the most elemental of appetites, that of hunger; the most reconstitutive one, that of sleep; and the most preservative one, that of sex; while these sundry hedonic appetites prove to be subservient to the progressive development of life, by what kind of process is this progressive development itself brought about? How do these developmental increments arise that are the organic embodiment of a higher stage of life?

It is pretty generally known that two opposite views of what is called evolution are each defended by eminent biologists; namely, that of preformation, and that of new-formation. The former view has its philosophical counterpart in the Hegelian conception of world-evolution. It is conceived as a process rendering explicit what was already implicitly contained in a pre-existing totality of being. Biologically this view of actual pre-existence led to the conclusion, that all foregone and all future generations have existed precreated and preformed, either in the reproductive organs of all-mother Eve (ovulists), or in the seed of her sinful consort (animalculists). Under a modernized guise this same theory of preformation was recently revived by Weismann, who has now, however, virtually abandoned it.

The alternate hypothesis, which maintains that organic development is achieved through vital interaction of the organism with its medium, is not only far more intelligible, but is also supported by superior circumstantial evidence. It assumes that increments of development, acquired, as they actually are, through interaction with the medium, when firmly grafted in the organic structure and unified with the same, become potentially represented in the molecular structure of the reproductive germ. This, in fact, would seem strikingly demonstrated in nature, for instance, in the unitary fusion of originally separate individuals, which at last come to form the so-called segments or *metamera* of complex organisms. These have evidently managed to secure their molecular representation in the reproductive germ.

I think it can be safely assumed that it is through vital toil that organic progress is achieved. And it is this organic progress with its cumulative preservation of vital results, that has teleologically to be called the aim of evolutionary transformation.

Organic development through natural selection is not rightly understood, when the determination of favorable variations is wholly attributed to the conditions of the medium. Such variations as are particularly advantageous for life in a special medium are indeed thus selected. And this no doubt is the principal agency by which distinct species become established. But selective fitting for life in a given medium is apt to fit the organism into narrowing grooves of existence. An extreme example of this is given in the fitting for the parasitic mode of existence, which leads to an all but complete deterioration of the organs of the life of outside relations, with complete entodermic supremacy. What a subject for a moral sermon! On it might be based the entire "gospel of work;" nay, ethics itself needs no stronger biological support.

Whatever natural selection may accomplish for better or worse, individuals arising with variations which eventually prove to stand higher in the scale of being, are not merely selected as the fittest to live in the specifically given medium of their progenitors. They themselves select a medium fitter for their higher endowments. And it is this self-selection of a more suitable medium that becomes predominant in the human race, whose progress and ascendancy are chiefly due to it. And due, furthermore, to self-imposed transformation of the selected medium in keeping with acquired increments of development.

The "struggle for existence," which has its root in the passions of hunger, becomes thus—like hunger itself—a means for the attainment of higher existence; and the "survival of the fittest" becomes a survival of those best fit for a higher mode of life.

The ruthlessness of this struggle, however much it may become mitigated in the course of human civilization, will remain a process of elimination of at least the assailers and obstructors

of the higher life. It receives its ethical justification when rationally waged in the defence and upholding of its wealth and worth.

Our ability to decide what kind of life may rightly be called "higher" can, of course, be cynically questioned. But, though superiority may not always be immediately evident in a special case, experience on the whole proves conclusively and superabundantly the existence of an ascending scale of being, however gropingly established. Thwarted ever so often, and forced to recede, the progressive tide has proved victorious in the end, so far at least as the history of our own planet has proceeded. And is it not just this pathetic perilousness and transitoriness of individual existence, this precariousness of human culture, that infuses into our life, on the one hand, our tender solicitude for those we love; arousing, on the other hand, our martial valor, our *ἀνδρεία*, in defence of what we deem life's wealth and worth?

IV.

In order clearly to apprehend the end and aim of ethical conduct or right living, we have definitely to know in what higher or rational life really consists.

Candid observation can hardly fail to recognize, that we are fundamentally emotional and volitional beings, whose instinctive feelings and doings, originally sense-aroused and sense-guided, become gradually enlightened and directed by developing reason. And it seems pretty obvious that the emotive and volitional root of what we generally hold to be most precious in life has to be sought in those intuitive affections that bind together with deepening significance and widening comprehensiveness the lives of kindred beings.

Only intellectual perversity can pretend to estimate these affections from the point of view of egoistic hedonism. This mode of interpretation is too frivolous or too sophistic to deserve serious consideration. Even in their purely instinctive origin these affections are fundamentally and essentially altruistic. However ravenous and lustful, even to revelling in hot blood and the tearing of palpitating flesh, tiger-like

voluptuousness may dwell in beast and man ; surely the affectionate solicitude of the tigress for her cubs is essentially devoted to their well-being, and not a mere pleasurable gratification of her own appetites. Nor are the caresses of the mates mere expressions of self-regarding passions. They unmistakably betoken affectionate consideration for each other ; a sympathetic community of needs, grounded in the fact that, though different individuals, they are in verity bearers of complementary lives.

The emotions of affection form indeed part of the occluded self-consciousness of each individual, but they derive, nevertheless, their true significance, and have their veritable end, solely in correlation with the existence and qualities of other beings. In fine, they are distinctively altruistic, and belong thus to the life of outside relations. Their legitimate satisfaction is not of the nature of self-interest, nor of self-perfection, but is clearly found in reciprocity of sentiments.

The proud delight in the human worth, in the human beauty of the subjects of one's affection, is in essence no less altruistic than the distress at their sufferings, the anguish at their moral degradation. Here, as everywhere, it is the laboriously secured wealth and worth of life, realized and typified in the world-attuned human individual and his altruistic sentiments, that is the object of ethical approval and ethical joy. The self-regarding ethical consciousness of the individual has value only in so far as it prompts him to become more and more fully a living embodiment of the wealth and worth of life foreshadowed in the ethical ideal.

It is community of sentiments and reciprocity of affections that weave those invisible, yet prepotent links between kindred beings, which underlie ethical conduct. Ethical difficulties arise when there is no community of sentiments, no reciprocity of affections between beings of, nevertheless, the same kindred nature. The instinctive emotions and the common interests that hold together the members of a primitive family, constitute it in feeling and action a superindividual unity—the germ of a social organism, if you like. These unifying ties do, however, not readily extend to such as are of more remote parentage,

and not co-operating units of the family group. And family ties themselves are apt to weaken and be broken.

Here the task of ethical reason begins. It recognizes the common humanity in strangers even, and seeks to harmonize conflicting interests. It condemns the faithless betrayers of the family, of the altruistic bond; sanctions their being rendered harmless, and the ill repute in which they are held.

In the intensifying and refining of altruistic sentiments, and in their extension over wider and wider groups of human and other beings, ethical progress finds its expression. This involves the extremely laborious process of devising means, not only for the harmonizing of clashing interests, but also for the awakening of reciprocal ethical sentiments in those to be included in the altruistic communion. This difficult task we seek to accomplish through social organization and social labor, national and international, secular and spiritual. And such organization and labor, to answer their purpose, have therefore to be instrumental in the deepening and widening of the ethical bearings of our life of outside relations. They have to be essentially altruistic in a collective sense, and not essentially self-regarding in an individualistic sense, as has been hitherto far too much the case in church and State.

When we consider that all, yes all, that imparts to life, not only its material well-being, but its supersensual, spiritual worth, accrues to us through the deepening and widening of social relations; and that the legitimate satisfaction of the spiritual needs and aspirations thus created can only be attained by finding in these social relations adequate response; it surely becomes evident that social life forms the veritable medium through which and in which moral existence becomes established.

Reason or intelligence, fantastically held by transcendentalists to be itself veritable reality, pre-existing in some wholly mysterious way as the self-sustained totality of all being, is—as experience very obviously shows—slowly developed in us by means of linguistic signs. The fact, which leads transcendentalists to look upon what they call “reason” as ultimate reality, is evidently the active part we play in discriminating,

judging, and controlling the increasingly complex material arising within our conscious content.

The self-activity, which is thus manifesting itself introspectively is, however, of the same nature as the activity which manifests itself to our senses as purposive movements. Both these volitional activities are primarily exerted on constituents of the conscious content, which content forms a more or less consistently ordered microcosm, in which the organized experience of self and the world is symbolically represented by mental signs.

The symbolical signs, upon which animals exercise their co-natural, though greatly inferior discriminating, judging, and controlling faculty, are almost entirely of an emotional, sensorial, and perceptual nature, directly stimulated or indirectly remembered.

It is by help of linguistic signs, by help of the *voluntary wielding* of the algebra of language, that we human beings become empowered to immeasurably extend the range of our self- and world-experience.

This algebra of language, by means of which we abstract, generalize, and condense given experience, admits in its capacity of a system of voluntary signs a more and more complete simultaneous representation of experience within the conscious content. This, in its turn, affords a more and more complete and systematized material upon which our discriminating, judging, and controlling power may be exerted.

It is this condensed and systematized experiential material, and our intensified voluntary power over it, which is at our disposal for ethical use or otherwise. And it is only when used in furtherance of the ethical end, that it deserves to be called truly rational; because the veritable aim of life as disclosed in its progressive development is then recognized.

We have direct volitional control only over our life of outside relations; not over entodermic functions. This volitional control is most strikingly manifest to the senses in the movements of our executive organs. We are organically endowed with the power of moving and directing them at will. And the intentions and aims with which we execute these volitional

actions are judged to be ethical, unethical, or ethically indifferent, because we are free to execute them, or to refrain from executing them. And it is only through these voluntary movements that we can give practical expression to our ideal designs. It is, however, not to these ideal designs, as such, nor to any other constituent of actual consciousness, that can be attributed the power, the motive energy, to set the executive movements going. This is done by our veritable self, which dwells in its organic, extra-phenomenal totality of being beyond any of its special mental or physical manifestations; revealing its ethical character in its ideal designs, and the ethical character of its practical conduct in their execution or non-execution through voluntary movements.

And remember that these voluntary movements, as *perceptually realized by us*, are themselves only symbolical signs of the real activity exercised by the being who executes them. When I greet you with the waving of my hand, the activity of my being makes itself known to you by arousing in *your* consciousness the perception of *my* waving hand. And, surely, it is not this perception of *yours* of myself, and my waving hand, that does the waving.*

The mechanically necessitarian interpretation of physical phenomena, which physical phenomena are as consciously realized by us, purely perceptual phenomena, finds its most glaring contradiction in the undeniable power of self-movement possessed by animal beings. The possibility of ethical conduct, and indeed of any kind of conduct, is wholly grounded in this biological fact. In this power of self-movement is to be found the key to the vexed problem of volitional freedom.†

I think it will be granted that biology proves essentially helpful in leading us to recognize that the ethical end is no other than the preservation, enhancement, and enjoyment of the inherited wealth and worth of life, which wealth and worth has its existence in social sentiments organically developed in us human beings, sentiments which find their appropriate satis-

* See "Mental Activity," *Mind*, Vol. XIV.

† See "Automatism and Spontaneity," *The Monist*, Vol. IV., No. 1.

faction in reciprocity, within an ethically rationalized social medium. The progressive realization of this ethical end brings with it its own exceeding reward, and needs no sanction beyond its own becoming, and its own proof of superiority before the tribunal of enlightened reason.

Those whose ethical ideal of perfect justice and all-protecting love leads them to invoke with child-like trust super-human modes of adjustment and guardianship, fail to give due weight to the pitiful, the appalling pathos of human life, whose delicately fashioned frame and high-strung sensibilities have ever been ruthlessly exposed to the million-fold perils of unfeeling nature. Yet this very background of ruthless insensibility forms the dark foil on which sparkle the felicities of human loving-kindness.

But what about the "moral imperative," the "ethical ought," the obligation under which by force of our ethical consciousness we feel compelled to confess ourselves in duty bound so to order our conduct as to make it subserve the ethical end? I think this superindividual, and therefore eminently mysterious obligation, will be found likewise grounded in biological relations.

The wealth and worth incorporated in what we perceive as our wondrously constituted organism is the result of the endless vital toil of innumerable foregone generations of kindred beings. We now alive in this present fleeting moment of endlessly past and endlessly future time are sole bearers and realizers of these laborious results, painfully wrought in ages upon ages. Unto our exclusive safe-keeping the precious inheritance is confided. The entire future welfare of the human race depends on its faithful preservation and unimpaired transmission. It seems self-evident, then, that this solidarity of past, present, and future existence imposes upon us the duty of holding our vital endowments in trust, and not for arbitrary disposal; forbidding us egotistically, wastefully to luxuriate either in the spiritual or the material wealth of our common inheritance.

From the unintermitting continuity of life and its affiliating heritage emanate those strange intuitive feelings of sympathetic

purpose that make of a multitude of separate lives one organic whole, linking the passing generations into a totality of being through community of achievement, in which the life-worthy abilities of all are miraculously rescued into rejuvenated presence from what to individual consciousness appears as the ravages of time and death.

This is the great transcendental paradox of human nature, that each of us is individually the bearer of the entire wealth and worth of life, and yet only an infinitesimal fragment in the collective life of humanity, in which each succeeding generation sums up the existence of all its predecessors.

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NATIONAL CHARACTER AND CLASSICISM IN ITALIAN PHILOSOPHY.

THE only way of describing the character of a nation is to go back into its history and study the manifestations of its faculties, and to seek to discover what distinguishes it from other nations in universal society. For, however far we may trace back to unknown origins the primitive source of the aptitudes of races and nations, it is obvious that there must have been a moment of relative pause in the evolutionary movement. And the result of this must have been a certain psychological basis, from which, under the influence of the external circumstances, combined with the laws of life and history, there was subsequently developed their entire after activity. We believe that, in the case of the Italian race, we must admit this psychological basis to have been already in existence after the Roman conquest; that is, when the peoples of the peninsula, united under a single government, and bound and mingled in a single common life, attained a psychological unity, which the subsequent invasions of the barbarians diversified by the importation of new ethical elements, but which, so far from being destroyed, fused those elements anew into itself and assimilated them. From this original